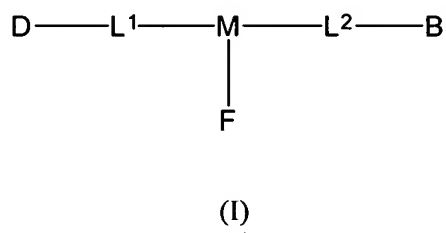


## Amendments to the Claims

Claim 1 (currently amended): A compound comprising a cyanine dye or derivative thereof containing at least one target bonding group selected from a carboxylic acid thioester group or a group suitable for covalent reaction with a thioester, ~~characterised in that wherein~~ said compound includes an affinity tag covalently bound thereto.

Claim 2 (currently amended): ~~A compound according to~~ The compound of claim 1, having the formula (I):



wherein:

D is a dye selected from a cyanine dye or a derivative thereof;

B is an affinity tag;

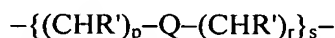
F comprises a target bonding group selected from a carboxylic acid thioester group and a 1,2-aminothiol group;

M is a group adapted for attaching to F; and

$\text{L}^1$  and  $\text{L}^2$  each independently ~~comprise~~ include a group containing from 1 – 40 linked atoms selected from carbon atoms which may optionally include one or more groups selected from the group consisting of  $-\text{NR}'-$ ,  $-\text{O}-$ ,  $-\text{CH}=\text{CH}-$ ,  $-\text{CO}-\text{NH}-$  and phenylenyl groups, where  $\text{R}'$  is selected from hydrogen and  $\text{C}_1 - \text{C}_4$  alkyl.

Claim 3 (currently amended): ~~A compound according to~~ The compound of claim 2, wherein each of L<sup>1</sup> and L<sup>2</sup> contains from 2 to 30 atoms.

Claim 4 (currently amended): ~~A compound according to~~ The compound of claim 2, wherein L<sup>1</sup> and L<sup>2</sup> are independently selected from the group consisting of:



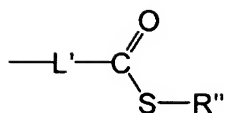
where Q is selected from the group consisting of: -CHR'-, -NR'-, -NR'-, -O-, -CH=CH-, -Ar- and -CO-NH-; R' is hydrogen or C<sub>1</sub> - C<sub>4</sub> alkyl, p is 0 - 5, r is 1 - 5 and s is 1 or 2.

Claim 5 (currently amended): ~~A compound according to~~ The compound of claim 4, wherein Q is selected from the group consisting of -CHR'-, -O- and -CO-NH-, where R' is hereinbefore defined.

Claim 6 (currently amended): ~~A compound according to any of claims 1 to 5~~ The compound of claim 1, wherein said affinity tag is selected from the group consisting of biotin and desthiobiotin.

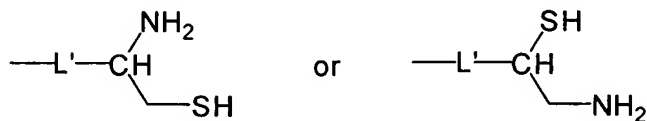
Claim 7 (currently amended): ~~A compound according to any of claims 1 to 5~~ The compound of claim 1, wherein said affinity tag is selected from the group consisting of his-tag, iminodiacetic acid and nitrilotriacetic acid.

Claim 8 (currently amended): ~~A compound according to any of claims 1 to 7~~ The compound of claim 2, wherein the target bonding group F is a carboxylic acid thioester of formula:



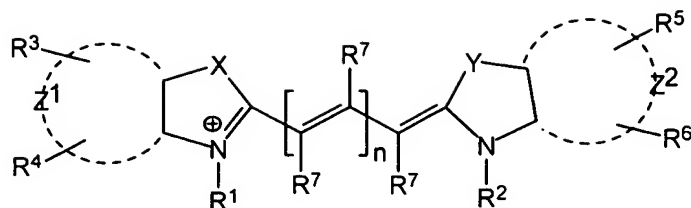
wherein L' is a bond or is a group containing from 1 – 30 linked atoms selected from the group consisting of carbon atoms and optionally carbon atoms including one or more groups selected from the group consisting of –NH–, –O– and –CO–NH–; and R'' is C<sub>1</sub> – C<sub>4</sub> alkyl, C<sub>6</sub> – C<sub>10</sub> aryl, or C<sub>7</sub> – C<sub>15</sub> aralkyl, which may be optionally substituted with sulphonate; or is the group –(CH<sub>2</sub>)<sub>2</sub>–CONH<sub>2</sub>.

Claim 9 (currently amended): ~~A compound according to any of claims 1 to 7~~ The compound of claim 2, wherein the target bonding group F is a 1,2-aminothiol group of formula:



wherein L' is ~~hereinbefore defined~~ a bond or is a group containing from 1 – 30 linked atoms selected from the group consisting of carbon atoms and carbon atoms including one or more groups selected from the group consisting of –NH–, –O– and –CO–NH–.

Claim 10 (currently amended): ~~A compound according to any of claims 1 to 9 wherein the compound has~~ The compound of claim 2, having the formula (II):



(II)

wherein:

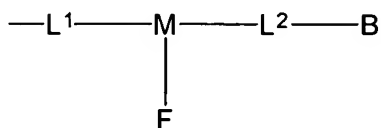
groups  $R^3$  and  $R^4$  are attached to the  $Z^1$  ring structure and groups  $R^5$  and  $R^6$  are attached to the  $Z^2$  ring structure;

$n$  is an integer from 1 to 3;

$Z^1$  and  $Z^2$  independently represent the atoms necessary to complete one ring or two fused ring aromatic or heteroaromatic systems, each ring having five or six atoms selected from carbon atoms and optionally no more than two atoms selected from oxygen, nitrogen and sulphur;

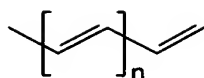
$X$  and  $Y$  are the same or different and are selected from:  $>CR^8R^9$ , oxygen, sulphur,  $-CH=CH-$ ,  $>N-W$  wherein  $N$  is nitrogen and  $W$  is selected from hydrogen and the group  $R^{10}$ ;

at least one of groups  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$ ,  $R^8$ ,  $R^9$  and  $R^{10}$  is the group:



where  $B$ ,  $F$ ,  $M$ ,  $L^1$  and  $L^2$  are hereinbefore defined;

groups  $R^7$  are independently selected from the group consisting of hydrogen and  $C_1 - C_4$  alkyl which may be unsubstituted or substituted with aryl, or two or more of  $R^7$  together with the group:



form a hydrocarbon ring system substituted with  $R^7$  and which may optionally contain a heteroatom selected from  $-O-$ ,  $-S-$  or  $>NR^7$ , wherein  $R^7$  and  $n$  are hereinbefore defined;

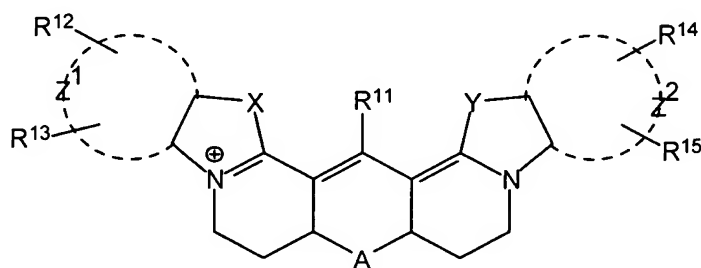
remaining groups  $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$  are independently selected from the group consisting of hydrogen, halogen, amide, cyano, nitro, mono- or di- $C_1 - C_6$  alkyl-substituted amino, carbonyl, carboxyl,  $C_1 - C_6$  alkyl,  $C_1 - C_6$  alkoxy, aryl, heteroaryl, aralkyl and the group  $-(CH_2)_m-Y$  where  $Y$  is selected from sulphonate, sulphate, phosphonate, phosphate and quaternary ammonium and  $m$  is zero or an integer from 1 to 6;

remaining groups  $R^8$ ,  $R^9$  and  $R^{10}$  are independently  $C_1 - C_6$  alkyl; and

remaining groups  $R^1$  and  $R^2$  are independently selected from hydrogen,  $C_1 - C_{10}$  alkyl, the group  $-(CH_2)_m-Y$  wherein  $Y$  and  $m$  are hereinbefore defined, and benzyl which may be unsubstituted or substituted by up to two nitro groups.

Claim 11 (currently amended): ~~A compound according to any of claims 1 to 9~~

~~wherein the compound has~~ The compound of claim 2, having the formula (III):



(III)

wherein

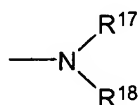
groups  $R^{12}$ ,  $R^{13}$ ,  $R^{14}$  and  $R^{15}$  are attached to the rings containing X and Y or,

optionally are attached to atoms of the  $Z^1$  and  $Z^2$  ring structures;

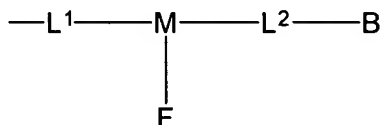
$Z^1$  and  $Z^2$  independently represent the atoms necessary to complete one ring or two fused ring aromatic or heteroaromatic systems, each ring having five or six atoms selected from carbon atoms and optionally no more than two atoms selected from oxygen, nitrogen and sulphur;

X and Y are the same or different and are selected from:  $>CR^8R^9$ , oxygen, sulphur,  $-CH=CH-$ ,  $>N-W$  wherein N is nitrogen and W is selected from hydrogen and the group  $R^{10}$ ;

A is selected from O and  $NR^{16}$  where  $R^{16}$  is the substituted amino radical:



at least one of groups  $R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R^{14}$ ,  $R^{15}$ ,  $R^{17}$  and  $R^{18}$  is the group:



~~where B, F, M,  $L^1$  and  $L^2$  are hereinbefore defined;~~

remaining groups  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R^{14}$  and  $R^{15}$  are independently selected from the group consisting of hydrogen, halogen, amide, cyano, nitro, mono- or di- $C_1 - C_6$  alkyl-substituted amino, carbonyl, carboxyl,  $C_1 - C_6$  alkyl,  $C_1 - C_6$  alkoxy, aryl, heteroaryl, aralkyl and the group  $-(CH_2)_m-Y$  where Y is selected from sulphonate, sulphate, phosphonate, phosphate and quaternary ammonium and m is zero or an integer from 1 to 6;

remaining groups  $R^8$ ,  $R^9$  and  $R^{10}$  are independently  $C_1 - C_6$  alkyl;

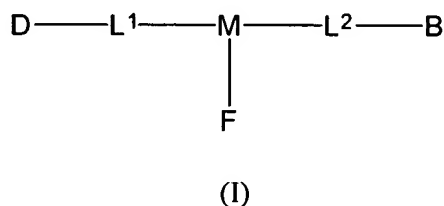
remaining group R<sup>17</sup> is selected from hydrogen, C<sub>1</sub> – C<sub>4</sub> alkyl and aryl; and remaining group R<sup>18</sup> is selected from C<sub>1</sub> – C<sub>6</sub> alkyl, aryl, heteroaryl, an acyl radical having from 2-7 carbon atoms, and a thiocarbamoyl radical.

Claim 12 (currently amended): ~~A compound according to~~ The compound of claim 10,  
~~or claim 11~~ wherein Z<sup>1</sup> and Z<sup>2</sup> are selected independently from the group consisting of phenyl, pyridinyl, naphthyl, quinolinyl and indolyl moieties.

Claim 13 (currently amended): ~~A compound according to~~ The compound of claim 10,  
~~or claim 11~~ wherein Z<sup>1</sup> and Z<sup>2</sup> are selected from phenyl and naphthyl moieties.

Claim 14 (currently amended): A method for labelling a protein of interest wherein said protein contains or is derivatised to contain an N-terminal cysteine, the method comprising:

- i) adding to a liquid containing said protein a compound of formula (I):



wherein:

D is a dye selected from a cyanine dye or a derivative thereof;

B is a bioaffinity tag;

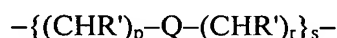
F comprises a target bonding group selected from a carboxylic acid thioester group and a 1,2-aminothiol group;

M is a group adapted for attaching to F; and

- $L^1$  and  $L^2$  each independently ~~comprise~~ include a group containing from 1 – 40 linked atoms selected from carbon atoms which may optionally include one or more groups selected from  $-NR'$ -,  $-O$ -,  $-CH=CH$ -,  $-CO-NH$ - and phenylenyl groups, where  $R'$  is selected from hydrogen and  $C_1 - C_4$  alkyl; and
- ii) incubating said compound with said protein under conditions suitable for labelling said protein.

Claim 15 (currently amended): ~~A compound according to~~ The method of claim 14, wherein each of  $L^1$  and  $L^2$  contains from 2 to 30 atoms.

Claim 16 (currently amended): ~~A method according to~~ The method of claim 14, wherein  $L^1$  and  $L^2$  are independently selected from the group:



where  $Q$  is selected from the group consisting of:  $-CHR'$ -,  ~~$-NR'$~~   $-NR'$ -,  $-O$ -,  $-CH=CH$ -,  $-Ar$ - and  $-CO-NH$ -;  $R'$  is hydrogen or  $C_1 - C_4$  alkyl,  $p$  is 0 – 5,  $r$  is 1 – 5 and  $s$  is 1 or 2.

Claim 17 (currently amended): ~~A method according to~~ The method of claim 16, wherein  $Q$  is selected from the group consisting of  $-CHR'$ -,  $-O$ - and  $-CO-NH$ -, where  $R'$  is hereinbefore defined.

Claim 18 (currently amended): ~~A method according to any of claims 14 to 17~~ The method of claim 14, further comprising separating and/or purifying the dye-labelled protein of interest by affinity chromatography.



Claim 19 (currently amended): ~~A method according to any of claims 14 to 18~~ The method of claim 14, wherein said protein of interest is selected from ~~antibody, antigen, protein, peptide,~~ the group consisting of antibodies, antigens, proteins, peptides, microbial materials, cells and cell membranes.

Claim 20 (new): The compound of claim 11, wherein  $Z^1$  and  $Z^2$  are selected independently from the group consisting of phenyl, pyridinyl, naphthyl, quinolinyl and indolyl moieties.

Claim 21 (new): The compound of claim 11, wherein  $Z^1$  and  $Z^2$  are selected from phenyl and naphthyl moieties.